

ABSTRACT

There is provided a method for correcting a photo mask, which allows the difference between a test mask and a corrected mask with respect to an error of line width depending on coarse/dense pattern to be decreased when the photo masks are corrected by optical proximity effect correction.

The present method is consisted of : producing a test mask which acts as a mask for extracting process model for applying an optical proximity effect correction method (s1); transferring and measuring the dimensions of the transferred pattern using the test mask (s2 and s3); obtaining a function model (referred to as process model) of which a simulated result of the transferred pattern of a mask pattern of the photo mask using a function model matches the measured result (s4); obtaining a mask pattern of which a transferred pattern matches a designed pattern using said process model and creating mask data in accordance with the obtained mask pattern (s5); producing a corrected mask in accordance with the created mask data (s5); and setting an exposing condition where an OPE characteristic becomes flat with respect of wide and narrow pitches by adjusting at least one of a numerical aperture (NA) and a coherence factor (σ) of an exposing device when the corrected mask is transferred.